Part I

Surviving Setup

Chapter 1: Selecting the Right Vista Version

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Selecting the Right Vista Version

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If you haven't purchased Vista yet—or you'd like to know whether or not it's worth upgrading to a more capable version of Vista—this chapter is for you. A step-by-step procedure leads you through the ins and outs of selecting the right version of Vista for you.

An Overview of All the Vista Versions

Back in 2001, life was easy: Microsoft released Windows XP in just two product editions, Windows XP Home Edition and Windows XP Professional Edition. The difference between the products was fairly obvious; and with its enhanced feature set, XP Pro was the more expensive version, as one might expect.

Over time, however, Microsoft muddied the waters with a wealth of new XP product editions. Three major product editions were added: Windows XP Media Center Edition, which received three major releases and one minor update between 2002 and 2005; Windows XP Tablet PC Edition, which received two major releases between 2002 and 2005; and Windows XP Professional x64 Edition, which took most of XP Pro's feature set and brought it to the x64 hardware platform. Other XP versions, such as XP Embedded and XP Starter Edition, can't really be considered mainstream products because they target specific usage scenarios and aren't broadly available to consumers.

Most PCs sold over the past decade are 32-bit computers based on Intel's x86 platform. While the industry was widely expected to make the jump to 64-bit computing at some point, that leap has come from an unexpected place: Intel's tiny competitor AMD developed the so-called x64 platform, which is essentially a 64-bit version of the aging x86 platform. x64-based PCs are completely compatible with x86 software; and though all PCs sold today are, in fact, x64-compatible, most PC operating systems (including Windows Vista) are sold in 32-bit versions for compatibility reasons. Even Intel is on board: Though the x64 platform was created by AMD, all of Intel's PC-oriented microprocessors are now x64-compatible as well.

Though not as technically elegant as so-called "native" 64-bit platforms such as the Itanium, x64 does provide all of the benefits of true 64-bit computing—including, most importantly, a flat 64-bit memory address space that obliterates the 4GB memory "ceiling" in the 32-bit world. For the purposes of this book, when I refer to 64-bit computing, I mean x64.

You may occasionally hear Vista's versions referred to as SKUs, a term that stands for *stock keeping units*. I typically use the more common terms *product edition, version,* and *product version* throughout this book instead.

What follows is a review of the major Windows XP versions that Microsoft shipped between 2001 and 2006. In a moment, I'll compare these products with their corresponding Vista versions:

- Windows XP Starter Edition (less-developed countries only)
- Windows XP Embedded (sold in embedded devices only)

- Windows XP Home Edition
- Windows XP Home Edition N (European Union only)
- Windows XP Media Center Edition
- Windows XP Tablet Edition
- Windows XP Professional Edition
- Windows XP Professional Edition N (European Union only)
- Windows XP Professional Edition K (South Korea only)
- Windows XP Professional x64 Edition
- Windows XP for Itanium-based Systems

All Windows XP product versions, except Windows XP Professional x64 Edition, were available only in 32-bit versions.

For Windows Vista, Microsoft surveyed the market and came away with two observations. First, an experiment bifurcating the Microsoft Office product line into multiple product editions had proven enormously successful for the company. Second, customers were willing to pay a bit more for premium product versions, such as XP Media Center Edition, that offered extra features. Clearly, Microsoft's experiences over the past few years led directly to the situation we have with Windows Vista: The company has created six core Vista product editions, two of which can be described as premium versions. (If you include the so-called N and K editions (for the European Union and South Korea, respectively), there are actually nine product editions. If you count the 32-bit and x64 (64-bit) versions separately, since they are in fact sold separately for the most part, there are 17 product editions. Add the (PRODUCT) RED version of Windows Vista Ultimate—which is available only with select new PCs from Dell—and you've got 18. Here's the complete list:

- Windows Vista Starter
- Windows Vista Home Basic
- Windows Vista Home Basic (x64)
- Windows Vista Home Premium
- Windows Vista Home Premium N — European Union only
- Windows Vista Home Premium (x64)
- Windows Vista Home Premium N (x64) — European Union only
- Windows Vista Business
- Windows Vista Business K — South Korea only
- Windows Vista Business N — European Union only
- Windows Vista Business (x64)
- Windows Vista Business K (x64) — South Korea only
- Windows Vista Business N (x64) — European Union only
- Windows Vista Enterprise
- Windows Vista Enterprise (x64)
- Windows Vista Ultimate
- Windows Vista Ultimate (x64)
- Windows Vista Ultimate (PRODUCT) RED — Sold only through Dell on select machines

Secret

Microsoft originally planned an Itanium version of Windows Vista, which would run on high-end workstations. However, the company canceled this project during the beta process due to a lack of customer interest. Thus, the mainstream PC platform of the future is now secure: It will be 64 bits, and it will be x64, not Itanium.

tip

Notice anything else missing in that product lineup? That's right: There's no Embedded version of Windows Vista. Yet.

Confusingly, you also have to choose how you'll acquire Windows Vista. In addition to the most typical method—simply getting it with a new PC—you can purchase retail boxed copies of Windows Vista and other not-quite-retail versions of the software. It's confusing—but then that's why you're reading this chapter, no?

Here's my advice: Don't get bogged down in semantics or complicated counting exercises. With a little bit of knowledge about how these product editions break down and are sold, you can whittle the list down quite a bit very easily. Then you can evaluate which features are available in which editions and choose the one that's right for you based on your needs.

Understanding the Differences and Choosing the Right Version

The first step is to understand the differences between each Vista product edition. Then you need to understand the various ways in which you can acquire Windows Vista, either as a standalone product or as an upgrade to an existing version of Windows (including, confusingly, Windows Vista itself). Finally, you can weigh the various trade-offs of each option—features, price, and so on—and choose accordingly.

Step 1: Whittling Down the Product Editions List

I was really just having some fun at Microsoft's expense in the previous section; it's possible to categorize the Windows Vista product editions into four basic flavors. To do so, you need to temporarily forget about the differences between 32-bit versions and 64-bit versions (don't worry; I'll get to that) and just skip over the versions that aren't relevant. Once you do this, the following list emerges:

Windows Vista Home Basic

Windows Vista Home Premium

Windows Vista Business

Windows Vista Ultimate

This is a much more manageable list, but how did I arrive at it? After all, there were 18 product editions in the original list. It's time to take one more look, hopefully for the last time, at all those missing options.

Windows Vista Starter

You don't need or want Windows Vista Starter. It's that simple.

Windows Vista Starter is limited to 32-bit processors, supports only the basic Vista user interface, and addresses a limited amount of RAM. It's designed only as a loss leader to get Windows' pricing down to a level that's competitive in less-developed countries, where it can compete against low-cost PCs running the open-source Linux operating system.

More important, perhaps, Vista Starter is available only in a limited number of regions and cannot be purchased at retail, so it's a non-starter (I'm here all week, folks) for any mainstream or enthusiast Windows user.

Unless you're buying a PC in one of the few countries in which you can acquire Windows Vista Starter, you probably won't hear much more about this product; and if you are buying such a PC, your computing needs are pretty basic, so it's unlikely that you're ready for this book just yet.

The K and N Editions Aren't for You, Either

Whatever Vista versions are being offered in Korea (with a K moniker) or in Europe (with an N moniker), they're designed to satisfy the antitrust regulations and rulings in those locales, and you should ignore them also because these versions are more limited than the non-K and non-N Windows Vista versions sold in South Korea and the European Union (EU), respectively. In addition, they don't cost any less, so there's no reason to even consider them, even if you do live in these areas.

Consider the N editions of Windows Vista, which are sold only in EU markets. These products came about because of a 2004 EU ruling that required Microsoft to offer versions of Windows without the Windows Media Player included. The requirement for a separate version of Windows was intended to enhance competition in the market for media players, such as the downloadable RealPlayer application.

However, because Microsoft sells its N versions for the same price as its full-featured Windows versions, demand for the N versions never materialized. Until there's a big price difference, consumers will continue to treat N as "not interested." Ditto for the K versions.

You're Not the Enterprise

Windows Vista Enterprise is a special version of Windows Vista aimed at Microsoft's largest corporate customers. As such, it is very much like Windows Vista Business but with two main differences. One, it's available only through a corporate volume licensing subscription program. Two, it includes special licensing terms that allow you to run up to four more copies of the OS under a virtual machine on the same PC. Because of the unique way in which you must acquire this version, chances are good you won't be hunting around for Windows Vista Enterprise. That said, if you do get a PC from work with Windows Vista Enterprise on it, you're pretty much running a slightly souped-up version of Windows Vista Business.

64-Bit Versions of Windows Vista

The differences between 32-bit (x86) versions of Windows Vista and 64-bit (x64) versions are more complex. But here's the weird bit: Though virtually every single PC sold today is x64-compatible, virtually every single copy of Windows Vista that goes out the door on those new PCs is a 32-bit x86 version.

If you do manage to purchase a new PC with a 64-bit version of Windows Vista preinstalled—and yes, they are out there if you look hard enough—that PC will come from the factory with all of the 64-bit hardware device drivers that are needed to support whatever add-ons and peripherals ship with the machine.

Consumers who are building their own PCs or adding Windows Vista to an existing PC have an additional issue to consider that is outside of the basic capabilities discussion covered in this chapter: Should you purchase a 64-bit version of Windows Vista? After all, 64-bit versions of Windows Vista can access far more RAM than 32-bit versions (up to 128GB as of this writing, compared to less than 4GB of RAM in 32-bit versions). In addition, 64-bit versions of Windows Vista are nominally more secure than 32-bit versions, as discussed in Chapter 8. Does that mean that 64-bit versions of Windows Vista are "better"?

Not exactly. Though 64-bit versions of Windows Vista are widely compatible with the hardware and 32-bit software that Windows users have been using for years, these products simply aren't as compatible as 32-bit versions of Windows Vista. For very many people, compatibility is the most important consideration when it comes to upgrading their PC, because they want everything they've been using to continue working. Moreover, few people need 4GB of RAM today, let alone more than that.

Here's my advice. Typical consumers should stay away from x64 versions of Windows for the lifetime of Windows Vista. There will be niggling hardware and software compatibility issues on Vista x64 because Microsoft requires hardware vendors to ship different drivers for the 32-bit (x86) and 64-bit (x64) versions of Vista. Guess which one is easier? Though hardware and software compatibility has already improved dramatically since Vista first shipped, typical users will be frustrated by the one or two incompatible applications or devices that are likely to appear. It's just not worth it. Not yet.

Put another way, if you have to ask—that is, if you're unsure whether you should be using Vista x64—then the answer is still the same: You shouldn't be running Vista x64. That said, Vista x64 is considerably more viable than it was when Vista first appeared; and it's moving quickly into the mainstream, though it's not quite there yet. Maybe by the next version of Windows.

For the coming year, gamers, digital-content creators, CAD-CAM workers, science and engineering users, and other power users who run into the 4GB ceiling in 32-bit versions of Windows are ideal candidates for Vista x64. These types of users understand the risks and limitations of the x64 platform and don't need my advice anyway. Enjoy the headroom.

Contrary to the conventional wisdom, 64-bit software isn't magically faster than 32-bit software. That said, 64-bit PCs running a 64-bit version of Windows Vista and native 64-bit software can often outperform 32-bit alternatives, but that's because you can add far more RAM to the 64-bit machine. Systems with massive amounts of memory just aren't as constrained and can operate to their full potential.

Windows Vista Ultimate (PRODUCT) RED

There are plenty of good reasons to consider Windows Vista Ultimate (PRODUCT) RED, as this version is part of the (PRODUCT) RED series of products, which helps the Global Fund combat AIDS in Africa. When you buy a (PRODUCT) RED product, you're helping others in need.

From a technology perspective, however, Windows Vista Ultimate (PRODUCT) RED is functionally identical to the "normal" versions of Windows Vista Ultimate, so readers of this book who have Windows Vista Ultimate (PRODUCT) RED will be as well-served as other Vista Ultimate users. Note that Windows Vista Ultimate (PRODUCT) RED cannot be purchased at retail (or online) as a standalone software package. It is sold only with specific PC models from the PC giant Dell.

If you're curious, Windows Vista Ultimate (PRODUCT) RED includes six unique (PRODUCT) RED–inspired wallpapers, a (PRODUCT) RED screen saver, two (PRODUCT) RED Windows Sidebar gadgets, and a (PRODUCT) RED–themed DreamScene animated background.

Step 2: Understanding the Differences between the Product Editions

Once you've narrowed the list down to the four contenders, it's time to evaluate them and understand which features are available in each product edition. There are various ways to present this kind of information, but tables, logically divided by category, are easy on the eyes and mind. Tables 1-1 through 1-10 list the five main Windows Vista product editions from which you can choose, and indicate which features are included with each.

Table 1-1: User Interface Features

	Home Basic	*Home Premium*	*Business*	*Enterprise*	*Ultimate*
Windows Vista Basic UI	Yes	Yes	Yes	Yes	Yes
Windows Aero UI ("Glass")	—	Yes	Yes	Yes	Yes
Windows Flip	Yes	Yes	Yes	Yes	Yes
Windows Flip 3D	—	Yes	Yes	Yes	Yes
Live Taskbar thumbnails	—	Yes	Yes	Yes	Yes
Instant search	Yes	Yes	Yes	Yes	Yes
Live content organization in Explorer windows	Yes	Yes	Yes	Yes	Yes

Table 1-2: Security Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
User Account Control (UAC)	Yes	Yes	Yes	Yes	Yes
Windows Security Center	Yes	Yes	Yes	Yes	Yes
Windows Defender	Yes	Yes	Yes	Yes	Yes
Windows Firewall	Yes	Yes	Yes	Yes	Yes
Internet Explorer 7 Protected Mode	Yes	Yes	Yes	Yes	Yes
Phishing Filter (IE7 and Windows Mail)	Yes	Yes	Yes	Yes	Yes
Windows Update (can access Microsoft Update)	Yes	Yes	Yes	Yes	Yes
Parental Controls	Yes	Yes	—	—	Yes

Table 1-3: Performance Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Windows ReadyDrive	Yes	Yes	Yes	Yes	Yes
Windows ReadyBoost	Yes	Yes	Yes	Yes	Yes
64-bit processor support	Yes	Yes	Yes	Yes	Yes
Maximum RAM (32-bit version)	4GB	4GB	4GB	4GB	4GB
Maximum RAM (64-bit version)	8GB	16GB	128+GB	128+GB	128+GB
Physical processor support	1	1	2	2	2
Processor core support	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited

Table 1-4: Reliability Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Manual file backup and recovery	Yes	Yes	Yes	Yes	Yes

continues

Table 1-4: *(continued)*

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Automatic backup	Yes, but not to a network location	Yes	Yes	Yes	Yes
Shadow Copies	—	—	Yes	Yes	Yes
System image backup and recovery	—	—	Yes	Yes	Yes
Encrypting File System (EFS)	—	—	Yes	Yes	Yes
Windows BitLocker Full Drive Encryption	—	—	—	Yes	Yes
Windows SuperFetch	Yes	Yes	Yes	Yes	Yes
Automatic hard disk defragmentation	Yes	Yes	Yes	Yes	Yes

Table 1-5: Internet Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Internet Explorer 7	Yes	Yes	Yes	Yes	Yes
RSS support	Yes	Yes	Yes	Yes	Yes
Windows Mail	Yes	Yes	Yes	Yes	Yes

Table 1-6: Bundled Applications

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Windows Calendar	Yes	Yes	Yes	Yes	Yes
Windows Contacts	Yes	Yes	Yes	Yes	Yes
Windows Sidebar	Yes	Yes	Yes	Yes	Yes
Games Explorer	Yes	Yes	Yes	Yes	Yes
Premium games	—	Yes	Yes	Yes	Yes

Table 1-7: Digital Media Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Windows Photo Gallery	Yes	Yes	Yes	Yes	Yes
Themed photo slide shows	Yes	Yes	Yes	Yes	Yes
Windows Media Player 11	Yes	Yes	Yes	Yes	Yes
Windows Media Center	—	Yes	—	—	Yes
Windows Media Center HDTV and CableCard support	—	Yes	—	—	Yes
Xbox 360 Media Center Extender compatibility	—	Yes	—	—	Yes
Windows Movie Maker	Yes	Yes	—	—	Yes
Windows Movie Maker HD format support	—	Yes	—	—	Yes
Windows DVD Maker	—	Yes	—	—	Yes

Table 1-8: Networking Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Network and Sharing Center	Yes	Yes	Yes	Yes	Yes
Improved wireless networking	Yes	Yes	Yes	Yes	Yes
Improved power management	Yes	Yes	Yes	Yes	Yes
Number of supported simultaneous peer network connections	5	10	10	10	10
Windows Meeting Space	View only	Yes	Yes	Yes	Yes
Improved file and folder sharing	Yes	Yes	Yes	Yes	Yes
Network Projector support	—	Yes	Yes	Yes	Yes
Presentation settings	—	Yes	Yes	Yes	Yes
Remote Desktop	Client only	Client only	Yes	Yes	Yes

continues

Table 1-8: *(continued)*

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Join domain (Windows Server/SBS)	—	—	Yes	Yes	Yes
Offline files and folder support	—	—	Yes	Yes	Yes
IIS Web Server	—	—	Yes	Yes	Yes

Table 1-9: Mobility Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Windows Mobility Center	Partial	Partial	Yes	Yes	Yes
Sync Center	Yes	Yes	Yes	Yes	Yes
Tablet PC functionality	—	Yes	Yes	Yes	Yes
Touch-screen support	—	Yes	Yes	Yes	Yes
Windows SideShow (auxiliary display support)	—	Yes	Yes	Yes	Yes

Table 1-10: Other Features

	Home Basic	Home Premium	Business	Enterprise	Ultimate
Windows Anytime Upgrade	Yes (to Home Premium or Ultimate)	Yes (to Ultimate)	Yes (to Ultimate)	—	—
Windows Ultimate extras	—	—	—	—	Yes
Speech recognition support	Yes	Yes	Yes	Yes	Yes
Accessibility settings and Ease of Access Center	Yes	Yes	Yes	Yes	Yes
Windows Welcome Center	Yes	Yes	Yes	Yes	Yes
XPS document support	Yes	Yes	Yes	Yes	Yes
Windows Fax and Scan	—	—	Yes	Yes	Yes

One big feature you don't get with Windows Vista Home Basic is the beautiful Windows Aero user interface, described in detail later in the book. If you want the absolute best graphical experience, don't pick Home Basic. That said, you might be surprised that the default Windows Vista Home Basic UI, called Windows Vista Standard, is pretty decent. You can find out more about this and other Vista UIs in Chapter 4.

Though 32-bit versions of Windows Vista "support" 4GB of RAM, they can access only about 3.1GB of RAM, even when a full 4GB of RAM is installed in the PC. This is because of a limitation in the way that 32-bit versions of Windows handle memory access. If you were to install an x64 version of Windows Vista on the same system, you would have access to the entire 4GB of RAM. 64-bit Vista versions have dramatically improved memory capacity, as noted in the preceding tables.

Regarding that 128GB address space on Windows Vista Business, Enterprise, and Ultimate, it's a moving target and could, in fact, go up in the years ahead. When Microsoft first shipped Windows Vista, a PC with 128GB was almost science fiction. It still is today, frankly, but as PC and workstation makers make ever more powerful machines, it's possible that one will eventually cross the 128GB-of-RAM barrier during Windows Vista's lifetime. If that happens, Microsoft will evaluate increasing the memory limit in x64 versions of Vista Business, Enterprise, and Ultimate.

With the exception of the Remote Desktop and Mobility Center features for portable PCs—both of which are limited in the Home versions—most of the features of Windows Vista are the same in all versions.

The home-oriented versions of Vista are more limited than the business versions in some ways, but they also include some unique multimedia functionality that's not available to Vista Business and Enterprise users. If the restrictions of a given version prevent you from using a feature you need in a more capable version, it's easy to upgrade Vista's Home and Business versions to Vista Ultimate. To do so, you can use the built-in Windows Anytime Upgrade applet (described later in this chapter and in Chapter 2).

Step 3: Making the Right Product-Edition Choice

Armed with the information in the preceding tables, you can think of Windows Vista as being divided into three basic product types:

- There are the consumer- or home-oriented versions, such as Windows Vista Home Basic and Home Premium. These products tend to include interesting digital-

media functionality but not some of the more technically advanced reliability features, such as system image backup and recovery, EFS support, and domain support.

- The business-oriented versions of Windows Vista, including Windows Vista Business and Enterprise, include all of the business, reliability, and security features but are light in the digital-media arena (e.g., there's no Media Center, DVD Maker, Movie Maker, or so forth).
- On the high end, there's Windows Vista Ultimate, which very neatly combines all of the consumer-oriented features from Windows Vista Home Premium with all of the business and reliability benefits of Windows Vista Enterprise. Windows Vista Ultimate is, quite literally, a superset of all the other Vista product editions.

In any event, your options roughly break down between the consumer, business, and "über" versions of Vista, so you need to decide into which category you fall and then choose accordingly. The next sections help you break down these choices.

tip

Obviously, there is one other critical consideration here: price. For example, while Windows Vista Ultimate may seem like a best-of-both-worlds product, it also comes with premium pricing. Later in this chapter I'll describe the various ways in which you can purchase Windows Vista, and the cost of each version.

Choosing between Home Basic and Home Premium

Table 1-11 shows some of the features that differ between the Basic and Premium versions of Vista for home users. If you've decided that a Home version of Vista is all you need, Table 1-11 will help you decide which of the two available versions will best suit you. Note that Windows Vista Ultimate also supports all of Vista's Home features.

- **Home Basic**—Choose this if you don't need Media Center capabilities, the capability to burn DVDs, or any of the other features that come with Home Premium.
- **Home Premium**—Choose this if you have a Tablet PC (actually, it is hard to buy a Tablet PC that doesn't have at least Vista Premium installed on it) or if you want the more extensive multimedia features of the Premium version.

Table 1-11: Comparing Vista Home Basic and Home Premium

	Home Basic	*Home Premium*
Parental Controls	Yes	Yes
Windows Movie Maker	Yes	Yes
Themed slide shows	—	Yes
Windows Media Center	—	Yes
Windows Media Center—high-definition TV	—	Yes
Windows Media Center—CableCard support	—	Yes

continues

Table 1-11: *(continued)*

	Home Basic	Home Premium
Support for Media Center Extenders, including Xbox 360	—	Yes
Windows DVD Maker	—	Yes
Windows Aero user interface	—	Yes
Windows Tablet PC with touch-screen support	—	Yes
Windows SideShow	—	Yes
Windows Movie Maker HD	—	Yes
Backup of user files to a network device	—	Yes
Scheduled backup of user files	—	Yes
Network Projection	—	Yes
Presentation settings	—	Yes
New premium games	—	Yes
Windows Meeting Space	View only	Yes

Choosing between Vista Business and Enterprise

Table 1-12 shows the features present in the Business and Enterprise versions of Vista but not the Home versions, and the few features Enterprise has that Business doesn't. Note that Windows Vista Ultimate also supports all of Vista's business features.

- Both the Business and Enterprise versions, unlike the Home versions, support domain networking. This enables users to log on to a network server using Microsoft's Active Directory (AD) technology and share centrally managed resources.
- Enterprise supports a few additional features that might be crucial for your business. For example, BitLocker Drive Encryption enables you to securely encrypt files and folders. You can require users to have a physical token to decrypt and access these resources, protecting them from view if a PC is stolen or otherwise used by an unauthorized person.

Table 1-12: Comparing Vista Business and Vista Enterprise

	Business	Enterprise
Support for processors in two sockets	Yes	Yes
Shadow Copies	Yes	Yes
System image–based backup and recovery	Yes	Yes

continues

Table 1-12: *(continued)*

	Business	*Enterprise*
Encrypting File System	Yes	Yes
Desktop deployment tools for managed networks	Yes	Yes
Policy-based quality of service for networking	Yes	Yes
Windows Rights Management Services (RMS) client	Yes	Yes
Control over installation of device drivers	Yes	Yes
Network Access Protection Client Agent	Yes	Yes
Pluggable logon authentication architecture	Yes	Yes
Integrated smart card management	Yes	Yes
Wireless network provisioning	Yes	Yes
Domain join for Windows Server	Yes	Yes
Domain join for Windows Small Business Server	Yes	Yes
Group Policy support	Yes	Yes
Offline files and folder support	Yes	Yes
Client-side caching	Yes	Yes
Roaming user profiles	Yes	Yes
Folder redirection	Yes	Yes
Centralized power management via Group Policy	Yes	Yes
Windows Fax and Scan	Yes	Yes*
Internet Information Server	Yes*	Yes*
Small Business Resources	Yes	—
Windows BitLocker Drive Encryption	—	Yes
All 36 worldwide UI languages available	—	Yes
Simultaneous install of multiple UI languages	—	Yes
Subsystem for UNIX-based applications	—	Yes
Number of licenses for virtualized versions of the OS on the same hardware	0	4

*Feature is optional

Windows Vista Enterprise was originally going to include a unique feature called Virtual PC Express. However, before Windows Vista was finalized, Microsoft decided to make its entire Virtual PC product line, which lets you run operating systems and applications in virtualized environments under a host OS, available free. Therefore, now you can download Virtual PC without cost, regardless of which version of Windows Vista you have. There are even separate versions for Vista 32-bit and 64-bit (x64) products. See www.microsoft.com/virtualpc.

Choosing Windows Vista Ultimate

Windows Vista Ultimate combines all of the features available in all of the other Vista versions, and does so at a premium price. The only compelling reason to pay extra to get Vista Ultimate is if you absolutely must have two features, one of which exists only in Home Premium (such as Windows Media Center) and the other of which can be obtained only in Business or Enterprise (such as domain login).

Windows Vista Ultimate also includes a few unique features of its own, the most prominent of which is Windows Ultimate Extras, a series of Windows Update–based downloads that add new features and expand on existing Vista technologies. To date, Microsoft has made games, animated desktops, and various enterprise-related features available only via Ultimate Extras.

Of course, if cost is no object, you might purchase Vista Ultimate just because you want everything Microsoft has to offer. If so—*enjoy!*

Purchasing Windows Vista

There are almost as many ways to purchase Windows Vista as there are Vista product editions. This can make acquiring Windows Vista somewhat complex, especially if you want to purchase a Setup disk and install the operating system on your own PC. Here are the ways in which you can acquire Microsoft's latest operating system.

With a New PC

The single best way to acquire Windows Vista is with a new PC from a major PC maker such as Dell, HP, or Lenovo. That's because PC makers spend huge amounts of time testing every hardware device that they sell in order to ensure that customers have the best possible experience.

One thing that has sullied this market, of course, is *crapware*, an industry practice whereby PC makers include useless or unwanted preinstalled applications on their preconfigured PCs. The good news is that this practice is slowly going away: Dell and other PC makers now offer new PCs without crapware, either free or for a small fee.

The cost of Windows on a new PC varies from PC maker to PC maker and from machine to machine. Generally speaking, a copy of some version of Windows Vista will be included in the price of virtually every PC sold today, and the actual cost to you will range from roughly $30 to $80. The cost of upgrading to more expensive Vista versions varies as well. My informal research (read: browsing the sites of PC makers online) reveals that you can typically move from Windows Vista Home Basic to Home Premium for less than $30, which is an excellent deal. The upgrade to Vista Business will typically set you back

quite a bit more, around $100 to $130. The upgrade to Windows Vista Ultimate is about $125 to $150. (These additional costs are all based on a core system running Windows Vista Home Basic and can, of course, change over time.)

For example, Figure 1-1 shows Dell's "configurator" for a typical home PC.

1 Build My Dell
2 Add My Software & Accessories
3 Protect My Investment
4 Review & Continue
SWITCH TO LIST VIEW
SELECT MY OPERATING SYSTEM
Genuine Windows Vista® Home Premium - English
[Included in Price]
Genuine Windows Vista® Home Premium + Belkin Easy Transfer Cable
[add $39 or $1/month[1]]
Dell Recommends for a Faster Transition to Windows Vista
Genuine Windows Vista® Business - English
[add $100 or $3/month[1]]
Genuine Windows Vista® Ultimate - English
[add $120 or $4/month[1]]
WINDOWS VISTA® HOME PREMIUM
MANAGE INFORMATION EASILY
ADVANCED SECURITY FEATURES
WINDOWS MEDIA CENTER
WINDOWS AERO™ ENHANCED INTERFACE
Windows Vista
Previous Component
Go to Next Component
Buy Now

Figure 1-1: When you're buying a new PC, be sure to get the Vista version you really want.

As you'll see in a moment, the cost of upgrading to a better or more expensive Windows Vista version is almost always lower if you do it when you purchase the PC. Regardless of cost, however, it is always easier to upgrade during the purchase process because the PC maker will install and configure the OS for you.

Retail Boxed Copies

If you walk into an electronics superstore, the versions of Windows Vista you see are what's known as retail boxed copies of the software. You will see both *Full* and *Upgrade* versions of the software, and you should see versions of each for Windows Vista Home Basic, Home Premium, Business, and Ultimate. Here are the differences between the versions:

- **Full version:** A full version of Windows Vista (see Figure 1-2) can be used to perform a *clean install* of Windows Vista only. It cannot be used to upgrade an existing version of Windows to Windows Vista. Full versions of Windows Vista are more expensive than Upgrade versions.
- **Upgrade version:** An upgrade version of Windows Vista can be used to perform a clean install of Windows Vista or upgrade an existing version of Windows to Windows Vista. Upgrade versions of Windows Vista are less expensive than Full versions because you must be an existing Windows customer to qualify for Upgrade pricing. The Upgrade packaging for Windows Vista Home Premium is shown in Figure 1-3.

Windows Vista
Home Premium
The preferred edition of Windows for home desktop and mobile PCs
With Service Pack 1
Microsoft
Windows Vista Home Premium

Figure 1-2: The retail packaging for Windows Vista includes a cool pull-out case.

Figure 1-3: Note the prominent sticker on the Upgrade packaging.

Make sure you"re getting the latest version of Windows Vista when you purchase at retail. At the time of this writing that means a version that includes Service Pack 1, but I expect Microsoft to update its Vista retail packaging at least a few more times over the years.

That's the rub. Understanding how you qualify for an Upgrade version of Windows Vista can be somewhat confusing; and even then, it's not very clear when you can perform an in-place upgrade over an existing Windows version. Here are some guidelines.

Those Who Don't Qualify for an Upgrade Version of Windows Vista

If you are currently running any MS-DOS-based version of Windows—including Windows 95, Windows 98, Windows 98 Second Edition, or Windows Millennium Edition (Me)—or any version of Windows NT (3.x and 4.0), you don't qualify for any Upgrade version of Windows Vista. That means you need to grab a more expensive Full version instead. Because the Full versions of Windows Vista cannot be used to perform an in-place upgrade to Windows Vista, you need to back up all your documents and other data and your application settings, and find all your application install disks or executables so you can reinstall them after Vista is up and running.

Looking for an easy way to back up documents, settings, and other data and then restore it on Windows Vista? Good news: Windows Vista includes a tool for this purpose called Windows Easy Transfer.

Those Who Do Qualify for an Upgrade Version of Windows Vista

If you are running Windows 2000 or any mainstream desktop version of Windows XP—including Windows XP Home Edition, Professional Edition, Media Center Edition (any version), Tablet PC Edition (any version), or XP Professional x64 Edition—you qualify for an Upgrade version of Windows Vista.

That said, there are some limitations, depending on which Windows version you are running. Windows 2000 and Windows XP x64 users cannot upgrade to any Windows Vista version in place. These users will instead need to perform a clean install. (That is, they qualify for Upgrade pricing only.)

Those Who Do Qualify for an Upgrade Version of Windows Vista and an In-Place Upgrade (Sometimes)

If you're running any version of Windows XP except for x64 and you want to upgrade in place to Windows Vista, you can do so in some cases. The trick is understanding how different versions of Windows XP map to different versions of Windows Vista. For example, Microsoft will not let you upgrade from Windows XP Professional to Windows Vista Home Basic. Table 1-13 clarifies the in-place upgrade possibilities.

Table 1-13: Which Versions of XP Can Upgrade In-Place to Which Versions of Windows Vista

Windows Version	*Vista Home Basic/N*	*Vista Home Premium*	*Vista Business/N*	*Vista Ultimate*
Windows XP Home Edition	Yes	Yes	Yes	Yes
Windows XP Professional Edition	—	—	Yes	Yes
Windows XP Media Center Edition	—	Yes	—	Yes
Windows XP Tablet PC Edition	—	—	Yes	Yes

People with older Windows versions (9x, Me, NT) do not qualify for upgrade pricing, but Windows 2000 and XP x64 users do qualify for upgrade pricing—they just can't do an in-place upgrade. Instead, they need to use an Upgrade version of Vista to perform a clean install of the product. Confused?

Your decision regarding which version to purchase is also influenced by the cost difference of the more capable versions. In Table 1-14, you can see the current U.S. list prices for the different Vista versions. Pricing in countries other than the United States varies, but should roughly adhere to what is shown in Table 1-14. (Microsoft has already lowered the prices on certain Vista product editions once since the product became widely available, so you never know—this could change again.)

Table 1-14: U.S. List Prices for Different Vista Product Editions

Windows Vista Home Basic	
Windows Vista Home Basic Full	$199.00
Windows Vista Home Basic Upgrade	$99.95
Windows Vista Home Premium	
Windows Vista Home Premium Full	$239.00
Windows Vista Home Premium Upgrade	$129.00

continues

Table 1-14: *(continued)*

Windows Vista Business	
Windows Vista Business Full	$299.00
Windows Vista Business Upgrade	$199.00
Windows Vista Ultimate	
Windows Vista Ultimate Full	$349.00
Windows Vista Ultimate Upgrade	$219.00

Adding to the complexity here is that all retail versions of Windows Vista, except for Windows Vista Ultimate, are available only in 32-bit versions. If you want a 64-bit version of Windows Vista Home Basic, Home Premium, or Business, you can purchase the 32-bit version and then mail away for a 64-bit install disk. Windows Vista Ultimate includes both 32-bit and 64-bit installation disks.

OEM Versions

One of the biggest secrets in the software world is that Microsoft's operating systems are available from online retailers in special OEM versions (which come in just the Full SKU) that are aimed at the PC-builder market. These are the small "mom and pop"-type PC makers who build handcrafted machines for local markets. OEM packaging can be seen in Figure 1-4.

If you're buying a retail copy of Vista and you already own a previous version of Windows, such as XP, don't buy a full version of Vista. Find out what Microsoft's current requirements are to qualify for an upgrade version, which is much cheaper. To successfully load an upgrade version, you usually must be installing onto a machine that has the old version installed, or you must have the old version on a CD (which you insert briefly during the installation of the new OS as proof). Note, however, that you can in fact use an Upgrade version of Windows Vista to perform a clean install: you'll learn how in the next chapter.

Figure 1-4: Windows Vista OEM packaging is pretty bare-bones.

OEM versions of Windows Vista differ from retail versions in some important ways:

They are dramatically cheaper than retail versions. As shown in Table 1-15, the OEM versions of Windows Vista are much cheaper than comparable retail versions. Note, however, that OEM pricing fluctuates somewhat, so the prices you see online could be a bit different.

They do not come with any support from Microsoft. Because PC makers support the products they sell directly, Microsoft does not offer any support for OEM versions of Windows Vista. This explains the cost differential, by the way.

You are not really supposed to buy them unless you're building PCs that you will sell to others. Technically speaking, OEM versions of Windows Vista are available only to those who intend to build PCs to sell. Furthermore, online retailers who sell OEM versions of Windows Vista are supposed to verify that you are a PC builder and/or sell the products with some kind of hardware. For this reason, you are sometimes asked to purchase a hardware tchotchske such as a USB cable when you purchase OEM software.

There's no box. This shouldn't matter too much, but you don't get the cool Vista retail packaging when you buy OEM. Instead, you pretty much get an install disk shrink-wrapped to a piece of cardboard, and a product key.

Secret

Unlike the retail versions, it's very easy to purchase both 32-bit and 64-bit OEM versions of Windows Vista online. However, you can't purchase Upgrade OEM software, because OEM versions are aimed only at new PC installs.

Table 1-15: U.S. List Prices for Different Vista OEM Product Editions

Windows Vista Home Basic	
Windows Vista Home Basic Full	$90.99
Windows Vista Home Premium	
Windows Vista Home Premium Full	$99.99
Windows Vista Business	
Windows Vista Business Full	$139.99
Windows Vista Ultimate	
Windows Vista Ultimate Full	$169.99

Depending on which version you're looking at, the savings are usually substantial. All of the OEM products (which are Full versions) are less expensive than the Upgrade retail versions of Vista. That said, OEM products cannot be used to upgrade an existing PC: They're for new installs only.

OEM versions of Windows Vista are sometimes sold in multi-OS packs. For example, you can purchase a three-pack of Windows Vista Ultimate if you'd like.

Windows Anytime Upgrade

Unlike previous versions of Windows, Vista provides an integrated capability to upgrade from a less powerful version to a more capable version at any time. You simply run the Windows Anytime Upgrade applet, select a source from which to purchase an upgrade license, and your PC is quickly enhanced with the more powerful version you've selected. Because of the way in which the Vista product line is designed, however, Windows Anytime Upgrade is available only in three Vista product editions:

- **Windows Vista Home Basic** can be upgraded to Windows Vista Home Premium or Ultimate via Windows Anytime Upgrade.
- **Windows Vista Home Premium** can be upgraded to Windows Vista Ultimate via Windows Anytime Upgrade.
- **Windows Vista Business** can be upgraded to Windows Vista Ultimate via Windows Anytime Upgrade.

Windows Anytime Upgrade is shown in Figure 1-5.

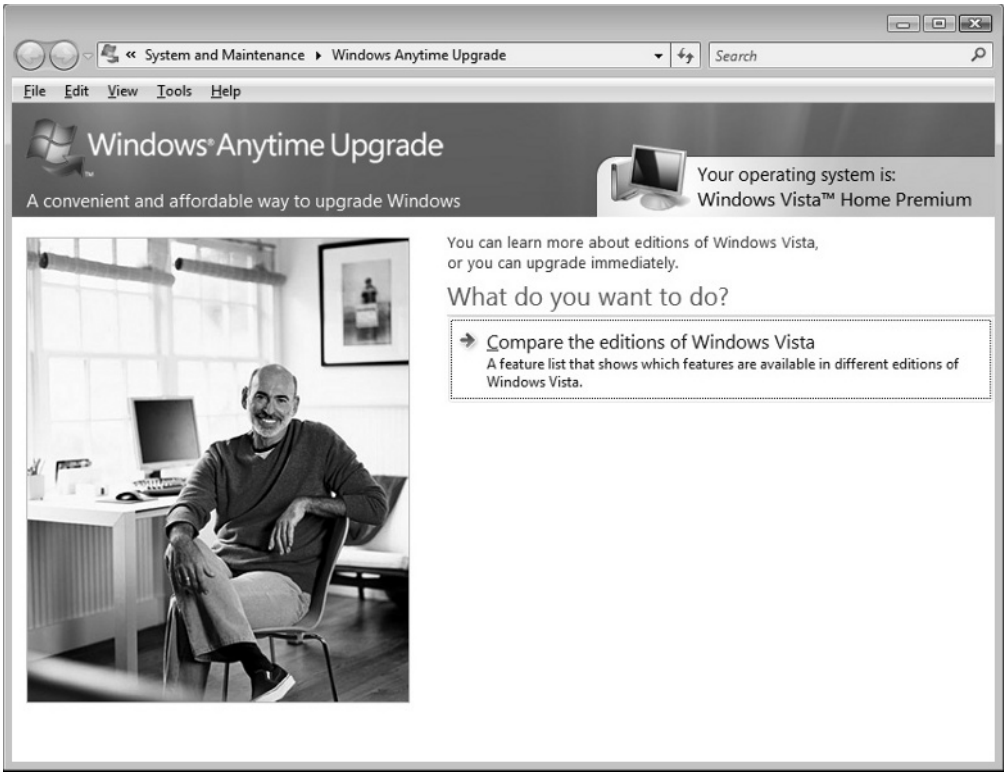
« System and Maintenance ▸ Windows Anytime Upgrade
Search
File Edit View Tools Help
Windows® Anytime Upgrade
A convenient and affordable way to upgrade Windows
Your operating system is:
Windows Vista™ Home Premium
You can learn more about editions of Windows Vista,
or you can upgrade immediately.
What do you want to do?
Compare the editions of Windows Vista
A feature list that shows which features are available in different editions of Windows Vista.

Figure 1-5: Windows Anytime Upgrade enables you to upgrade from certain Vista versions to other, more powerful versions.

Note that you cannot upgrade Vista Home Basic or Premium to Windows Vista Business or Enterprise. Likewise, there's no upgrade path from Vista Enterprise to Vista Ultimate. Purchasing a more capable version of Vista (Upgrade version) at retail and installing it over a lesser version is the only way to migrate in these cases.

Windows Anytime Upgrade is described in more detail in the next chapter.

Secret

There are other ways to acquire Windows Vista, actually. I mentioned previously that Microsoft sells subscription-based software through its volume licensing programs, for example. However, this book focuses on the ways in which individuals can acquire Windows Vista.

Summary

Windows Vista clearly offers a lot of options when it comes to picking a product version, but with a little know-how you will be able to make the right choice, one that matches both your needs and your budget. This chapter has provided what you need to know to match a Windows Vista version to your needs. Now you just need to figure out how much the upgrade is going to cost. Remember that it's often much cheaper to acquire a new Windows version with a new PC, so if you're going to be buying a new PC, be sure to get the right Vista version at that time. I cover this option in Chapter 2, along with other ways to install and upgrade to Windows Vista.